



Bayer Corporation  
November 6, 2002

SEQUENCE LISTING

<110> BAYER CORPORATION

<120> Pituitary Adenylate Cyclase Activating Peptide (PACAP) Receptor 3 (R3)  
Agonists and Their Pharmacological Methods of Use

<130> Bayer

<150> 09/407,832

<151> 1999-09-28

<150> 09/595,280

<151> 2000-06-15

<160> 341

<170> PatentIn version 3.1

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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn  
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His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
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Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu Gly Lys Arg Tyr Lys  
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Gln Arg Val Lys Asn Lys  
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His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly  
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Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg  
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His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu Glu  
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Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro Ser  
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Ser Gly Ala Pro Pro Pro Ser  
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His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln  
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Xaa Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr  
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Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Leu	Lys	Lys	Gly	Gly	Thr
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Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Leu	Lys	Lys	Gly	Gly	Thr
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His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln  
1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr  
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Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Leu	Lys	Lys
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Met	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys
			20				25				

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Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Gly Gly Thr  
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His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln  
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Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Leu Asn Gly Gly Thr  
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<400> 14

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Lys Leu Arg Lys Gln  
1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Leu Asn Gly Gly Thr  
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1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Gly	Gly	Thr
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Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys
			20				25				

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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr  
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His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Lys Leu Arg Lys Gln  
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Leu Ala Ala Lys Lys Tyr Leu Asn Asp Leu Lys Lys Gly Gly Thr Ser  
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Trp Cys Glu Pro Gly Trp Cys Arg  
35 40

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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Asp Ile Lys Lys Gly Gly Thr  
20 25 30

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1				5					10					15	

Leu	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Gly	Gly	Thr
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1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys	Gly	Gly	Thr
			20					25					30	

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1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Asn	Gly	Gly	Thr
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1				5					10					15	

Leu	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys	Gly	Gly	Thr
			20					25					30	

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1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys	Gly	Gly	Thr
			20					25					30	

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1				5					10					15	

Leu	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Asn	Gly	Gly	Thr
			20				25					30		

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1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Gly	Gly	Thr
			20				25					30		

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1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Gly	Gly
			20				25					30	

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Gly
			20				25					

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
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Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys
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Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Gln
			20				25					

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Asn	Gln
			20				25					30	

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1				5					10					15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Lys	Lys	Lys	Arg	Tyr
			20				25						30	

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Met	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys
			20				25				

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
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Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Asn  
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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Lys  
20 25

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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Glu Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Leu Asn  
20 25

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Met	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Leu	Asn
-			20				25				

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Leu	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Leu	Asn
			20				25				

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Leu Asn  
20 25

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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Asp Ile Leu Asn  
20 25

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<400> 41

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn  
20 25

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Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Leu	Lys
			20				25				

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<400> 43

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Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys
			20				25				

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Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg Tyr  
20 25 30

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<400> 45

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg  
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His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
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Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys  
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Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg	Tyr
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<400> 48

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys	Lys	Arg	Tyr
			20					25					30	

<210> 49  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 49

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys Arg  
20 25 30

<210> 50  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(29)  
<223>

<400> 50

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Lys Lys  
20 25

<210> 51  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 51

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 52  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(28)  
<223>

<400> 52

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Lys	Lys
			20					25			

<210> 53  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(28)  
<223>

<400> 53

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Ile	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Thr	Ile	Lys	Lys
			20					25			

<210> 54  
<211> 144  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> synthetic gene  
<222> (1)..(144)  
<223>

<400> 54  
ggatccatcg aaggctcgta ctccgatggt atcttcaccg actcctactc tcggtaccgc 60

aagcagatgg ctgtaaagaa atatctggct gcagtcctag gcaaacgtta caagcaacgc 120  
gttaaaaaca agtaatgact cgag 144

<210> 55  
<211> 114  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> synthetic gene  
<222> (1)..(114)  
<223>

<400> 55  
ggatccatcg aaggctcgta ctccgacgct gttttcaccg acaactacac gcgtctgcgt 60  
aaacagatgg ctgttaagaa atacctgaat tccatcctga actaatgact cgag 114

<210> 56  
<211> 123  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> synthetic gene  
<222> (1)..(123)  
<223>

<400> 56  
ggatccatcg aaggctcgta ctccgatgct gttttcaccg aaaactacac caagcttcgt 60  
aaacagctgg cagctaagaa atacctcaac gacctgaaaa agggcggtac ctaatgactc 120  
gag 123

<210> 57  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(38)



<223>

<400> 57

His Ser Asp Gly Ile Phe Thr Glu Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Leu Lys Lys Lys Arg Tyr Lys  
20 25 30

Gln Arg Val Lys Asn Lys  
35

<210> 58

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (28)..(28)

<223> AMIDATION

<400> 58

His Ser Asp Ala Val Phe Thr Glu Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Asn Ser Leu Lys Lys  
20 25

<210> 59

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (31)..(31)

<223> AMIDATION

<400> 59

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln

1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ser Ala Val Arg His Gly Gly Thr  
20 25 30

<210> 60  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (31)..(31)  
<223> AMIDATION

<400> 60

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Gln Gly Gly Thr  
20 25 30

<210> 61  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (31)..(31)  
<223> AMIDATION

<400> 61

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Lys Tyr Leu Ala Ala  
20 25 30

Val Arg His Gly  
35

<210> 62  
<211> 40  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (40)  
<223>

<400> 62

Ser Trp Cys Glu Pro Gly Trp Cys Arg His Ser Asp Ala Val Phe Thr  
1 5 10 15

Glu Asn Tyr Thr Lys Leu Arg Lys Gln Leu Ala Ala Lys Lys Tyr Leu  
20 25 30

Asn Asp Leu Lys Lys Gly Gly Thr  
35 40

<210> 63  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 63

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Asn Asp Ile Leu Lys Gly Gly Thr  
20 25 30

<210> 64  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 64

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Leu	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Leu	Asn	Gly	Gly	Thr
			20				25					30		

<210> 65  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 65

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Leu	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Asp	Ile	Leu	Lys	Gly	Gly	Thr
			20				25					30		

<210> 66  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 66

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Ala Asp Val Lys Lys Gly Gly Thr  
20 25 30

<210> 67  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(28)  
<223>

<400> 67

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Ala Asp Val Lys Lys  
20 25

<210> 68  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(28)  
<223>

<400> 68

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Leu Ala Val Lys Lys Tyr Leu Ala Ala Val Lys Lys  
20 25

<210> 69  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(28)  
<223>

<400> 69

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Lys	Lys
			20					25			

<210> 70  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(28)  
<223>

<400> 70

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys
			20					25			

<210> 71  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 71

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg  
20 25 30

<210> 72  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 72

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 73  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 73

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 74  
<211> 31  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (31)

<223>

<400> 74

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg	Tyr
			20				25					30		

<210> 75

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (31)

<223>

<400> 75

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Lys	Asn	Lys	Arg	Tyr
			20				25					30		

<210> 76

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (31)

<223>

<400> 76



His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 77  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 77

His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 78  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 78

His Ser Asp Ala Val Phe Thr Asp Gln Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Leu Ala Ala Lys Lys Tyr Leu Asn Thr Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 79  
<211> 31

<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 79

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	His	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg	Tyr
			20					25					30	

<210> 80  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 80

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	His	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg	Tyr
			20					25					30	

<210> 81  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 81

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Gln	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Leu	Ala	Ala	His	Lys	Tyr	Leu	Asn	Thr	Ile	Lys	Asn	Lys	Arg	Tyr
			20					25					30	

<210> 82

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (31)

<223>

<400> 82

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Gln	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Leu	Ala	Ala	Lys	His	Tyr	Leu	Asn	Thr	Ile	Lys	Asn	Lys	Arg	Tyr
			20					25					30	

<210> 83

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 83

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Lys	Lys	Lys	Arg
			20					25					30

<210> 84

<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 84

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Lys	Lys	Arg
			20					25					30

<210> 85  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 85

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg	Tyr
			20					25					30	

<210> 86  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 86

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Lys Lys Arg  
20 25 30

<210> 87

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(29)

<223>

<400> 87

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Lys Lys  
20 25

<210> 88

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(31)

<223>

<400> 88

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys Arg Tyr  
20 25 30

<210> 89  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(31)  
<223>

<400> 89

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Lys	Lys	Arg	Tyr
			20					25					30	

<210> 90  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 90

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Lys	Lys	Arg
			20					25					30

<210> 91  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(29)

<223>

<400> 91

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Lys	Lys
			20					25				

<210> 92

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(29)

<223>

<400> 92

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Lys	Asn	Lys
			20					25				

<210> 93

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(31)

<223>

<400> 93

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Val	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Lys	Lys	Arg	Tyr
			20					25					30	

<210> 94  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 94

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Val	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Lys	Lys	Arg
			20					25					30

<210> 95  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(29)  
<223>

<400> 95

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Val	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Lys	Lys
			20					25				

<210> 96  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 96



His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Val Lys Lys Tyr Leu Gln Ser Ile Lys Asn Lys  
20 25

<210> 97  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 97

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Asn Lys Arg Tyr  
20 25 30

<210> 98  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 98

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Val Ala Ala Lys Lys Tyr Leu Gln Ser Ile Leu Asn Lys Arg  
20 25 30

<210> 99  
<211> 29  
<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (29)

<223>

<400> 99

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Leu	Asn	Lys
			20					25				

<210> 100

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

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<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 100

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Cys	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 101

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 101

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Asp Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg  
20 25 30

<210> 102  
<211> 30  
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<213> Artificial Sequence

<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 102

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Glu Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg  
20 25 30

<210> 103  
<211> 30  
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<220>  
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<220>  
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<222> (1)..(30)  
<223>

<400> 103

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Phe Lys Lys Tyr Leu Asn Ser Ile Lys Asn Lys Arg  
20 25 30

<210> 104  
<211> 30

<212> PRT  
<213> Artificial Sequence

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<220>  
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<222> (1)..(30)  
<223>

<400> 104

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Gly	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 105  
<211> 30  
<212> PRT  
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<220>  
<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 105

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	His	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 106  
<211> 30  
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<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 106

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ile	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 107

<211> 30

<212> PRT

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<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 107

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Lys	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 108

<211> 30

<212> PRT

<213> Artificial Sequence

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<223> synthetic construct

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<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 108

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Leu	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 109

<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
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<222> (1) .. (30)  
<223>

<400> 109

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Met	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 110  
<211> 30  
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<220>  
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<222> (1) .. (30)  
<223>

<400> 110

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Asn	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 111  
<211> 30  
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<222> (1) .. (30)  
<223>

<400> 111

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Pro	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 112

<211> 30

<212> PRT

<213> Artificial Sequence

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<223> synthetic construct

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<222> (1) .. (30)

<223>

<400> 112

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Gln	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 113

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 113

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Arg	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 114  
<211> 30  
<212> PRT  
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<220>  
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<222> (1)..(30)  
<223>

<400> 114

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ser	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 115  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 115

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Thr	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 116  
<211> 30  
<212> PRT  
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<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(30)



<223>

<400> 116

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 117

<211> 30

<212> PRT

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<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 117

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Trp	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 118

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 118

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Tyr	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Arg
			20					25					30

<210> 119  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 119

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Ala	Asn	Lys	Arg
			20					25					30

<210> 120  
<211> 30  
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<220>  
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<222> (1)..(30)  
<223>

<400> 120

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Cys	Asn	Lys	Arg
			20					25					30

<210> 121  
<211> 30  
<212> PRT  
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<220>  
<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 121

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Asp	Asn	Lys	Arg
			20					25					30

<210> 122  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 122

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Glu	Asn	Lys	Arg
			20					25					30

<210> 123  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 123

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Phe	Asn	Lys	Arg
			20					25					30

<210> 124  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 124

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Gly	Asn	Lys	Arg
			20				25					30	

<210> 125  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 125

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	His	Asn	Lys	Arg
			20				25					30	

<210> 126  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>

<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 126

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Ile	Asn	Lys	Arg
			20					25					30

<210> 127  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 127

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Met	Asn	Lys	Arg
			20					25					30

<210> 128  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 128

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Asn	Asn	Lys	Arg
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

20

25

30

<210> 129  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 129

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Pro	Asn	Lys	Arg
			20					25					30

<210> 130  
<211> 30  
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<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 130

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Gln	Asn	Lys	Arg
			20					25					30

<210> 131  
<211> 30  
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<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 131

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Arg	Asn	Lys	Arg
			20				25					30	

<210> 132  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 132

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Ser	Asn	Lys	Arg
			20				25					30	

<210> 133  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 133

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Thr Asn Lys Arg  
20 25 30

<210> 134  
<211> 30  
<212> PRT  
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<220>  
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<220>  
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<222> (1) .. (30)  
<223>

<400> 134

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Val Asn Lys Arg  
20 25 30

<210> 135  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 135

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Trp Asn Lys Arg  
20 25 30

<210> 136  
<211> 30  
<212> PRT  
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<220>  
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<220>  
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<222> (1) .. (30)  
<223>

<400> 136

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Tyr	Asn	Lys	Arg
			20					25					30

<210> 137  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 137

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Ala	Arg
			20					25					30

<210> 138  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 138

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Cys Arg  
20 25 30

<210> 139  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 139

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Asp Arg  
20 25 30

<210> 140  
<211> 30  
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<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
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<222> (1)..(30)  
<223>

<400> 140

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Glu Arg  
20 25 30

<210> 141  
<211> 30  
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<220>

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<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 141

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Phe	Arg
			20				25					30	

<210> 142

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

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<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 142

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Gly	Arg
			20				25					30	

<210> 143

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 143

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn His Arg  
20 25 30

<210> 144  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 144

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Ile Arg  
20 25 30

<210> 145  
<211> 30  
<212> PRT  
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<220>  
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<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 145

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Lys Asn Leu Arg  
20 25 30

<210> 146  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
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<220>  
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<222> (1)..(30)

<223>

<400> 146

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Met	Arg
			20				25						30

<210> 147

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 147

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Asn	Arg
			20				25						30

<210> 148

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 148

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Pro	Arg
			20				25						30

<210> 149  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 149

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Gln	Arg
			20				25					30	

<210> 150  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 150

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Arg	Arg
			20				25					30	

<210> 151  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>

<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 151

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Ser	Arg
			20				25					30	

<210> 152  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 152

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Thr	Arg
			20				25					30	

<210> 153  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<400> 153

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Val	Arg
			20				25					30	

<210> 154  
<211> 30

<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 154

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Trp	Arg
			20					25					30

<210> 155  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 155

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Tyr	Arg
			20					25					30

<210> 156  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>



<400> 156

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Ala
			20					25					30

<210> 157

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 157

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Asp
			20					25					30

<210> 158

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 158

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Glu
			20					25					30

<210> 159

<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 159

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Phe
			20					25					30

<210> 160  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 160

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Gly
			20					25					30

<210> 161  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (30)  
<223>

<400> 161

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	His
			20					25					30

<210> 162

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 162

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Ile
			20					25					30

<210> 163

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1) .. (30)

<223>

<400> 163

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Lys
			20					25					30

<210> 164  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 164

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Leu
			20				25					30	

<210> 165  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PRPTIDE  
<222> (1)..(30)  
<223>

<400> 165

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Met
			20				25					30	

<210> 166  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)

<223>

<400> 166

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Asn
			20					25					30

<210> 167

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 167

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Pro
			20					25					30

<210> 168

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> PEPTIDE

<222> (1)..(30)

<223>

<400> 168

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Gln
			20					25					30

<210> 169  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 169

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Ser
			20					25					30

<210> 170  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 170

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Thr
			20					25					30

<210> 171  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE

<222> (1)..(30)  
<223>

<400> 171

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Val
			20				25					30	

<210> 172  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 172

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Trp
			20				25					30	

<210> 173  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1)..(30)  
<223>

<400> 173

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Lys	Tyr
			20				25					30	

<210> 174  
<211> 40  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (40)  
<223>

<400> 174

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Gln	Ser	Ile	Lys	Asn	Lys	Arg	Tyr	Ser
			20					25					30		

Trp	Cys	Glu	Pro	Gly	Trp	Cys	Arg
		35					40

<210> 175  
<211> 31  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> PEPTIDE  
<222> (1) .. (31)  
<223>

<400> 175

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asp	Tyr	Thr	Arg	Leu	Arg	Lys	Glu
1				5					10					15	

Val	Ala	Ala	Lys	Lys	Tyr	Leu	Glu	Ser	Ile	Lys	Asp	Lys	Arg	Tyr
			20					25					30	

<210> 176  
<211> 27  
<212> PRT  
<213> Artificial Sequence



<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 176

Glu	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 177  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 177

His	Lys	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 178  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 178

His	Ser	Lys	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 179

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (27)..(27)

<223> AMIDATION

<400> 179

His	Ser	Asp	Lys	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 180

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (27)..(27)

<223> AMIDATION

<400> 180

His	Ser	Asp	Gly	Lys	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 181  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 181

His	Ser	Asp	Gly	Ile	Lys	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 182  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 182

His	Ser	Asp	Gly	Ile	Phe	Lys	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 183  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 183

His Ser Asp Gly Ile Phe Thr Lys Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

<210> 184  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 184

His Ser Asp Gly Ile Phe Thr Asp Lys Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

<210> 185  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 185

His Ser Asp Gly Ile Phe Thr Asp Ser Lys Ser Arg Tyr Arg Lys Gln

1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

<210> 186  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 186

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Lys Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

<210> 187  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 187

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Glu Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

<210> 188  
<211> 27

<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 188

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Lys	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 189  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)  
<223> AMIDATION

<400> 189

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Glu	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 190  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27)..(27)

<223> AMIDATION

<400> 190

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Glu	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 191

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (27)..(27)

<223> AMIDATION

<400> 191

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Lys
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20				25			

<210> 192

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> synthetic construct

<220>

<221> MOD\_RES

<222> (27)..(27)

<223> AMIDATION

<400> 192

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Lys Ala Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

<210> 193  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<220>  
<221> MOD\_RES  
<222> (27) .. (27)  
<223> AMIDATION

<400> 193

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Lys Val Lys Lys Tyr Leu Ala Ala Val Leu  
20 25

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<400> 194

His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
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Met Ala Lys Lys Lys Tyr Leu Ala Ala Val Leu  
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<400> 195

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
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Met	Ala	Val	Glu	Lys	Tyr	Leu	Ala	Ala	Val	Leu
			20						25	

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<400> 196

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Glu	Tyr	Leu	Ala	Ala	Val	Leu
			20						25	

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<400> 197

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
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Met	Ala	Val	Lys	Lys	Lys	Leu	Ala	Ala	Val	Leu
			20						25	

<210> 198

<211> 27

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<223> AMIDATION

<400> 198

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Lys	Ala	Ala	Val	Leu
			20						25	

<210> 199

<211> 27

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<223> AMIDATION

<400> 199

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
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Met	Ala	Val	Lys	Lys	Tyr	Leu	Lys	Ala	Val	Leu
			20						25	

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<400> 200

His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Lys	Val	Leu
			20					25		

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His	Ser	Asp	Gly	Ile	Phe	Thr	Asp	Ser	Tyr	Ser	Arg	Tyr	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Val	Lys	Lys	Tyr	Leu	Ala	Ala	Lys	Leu
			20					25		

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His Ser Asp Gly Ile Phe Thr Asp Ser Tyr Ser Arg Tyr Arg Lys Gln  
1 5 10 15

Met Ala Val Lys Lys Tyr Leu Ala Ala Val Lys  
20 25

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<400> 322

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Met	Ala	Ala	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Arg	Ile
			20				25					30	

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<400> 323

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Gly	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Arg	Ile
			20				25					30	

<210> 324  
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<222> (1) .. (30)

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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Lys	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Arg	Ile
		20					25					30	

<210> 325

<211> 30

<212> PRT

<213> Artificial Sequence

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<222> (1) .. (30)

<223>

<400> 325

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Arg	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Lys	Asn	Arg	Ile
			20				25					30	

<210> 326

<211> 30

<212> PRT

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<222> (1) .. (30)

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<400> 326

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Lys Asn Arg Ile  
20 25 30

<210> 327  
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<400> 327

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile  
20 25 30

<210> 328  
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<400> 328

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile  
20 25 30

<210> 329  
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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Lys	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Pro	Asn	Arg	Ile
		20					25						30

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<222> (1) .. (30)

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<400> 330

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met	Ala	Arg	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Pro	Asn	Arg	Ile
			20				25						30

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<222> (1) .. (30)

<223>

<400> 331

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5					10					15	

Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Pro Asn Arg Ile  
20 25 30

<210> 332  
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<400> 332

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile  
20 25 30

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<400> 333

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile  
20 25 30

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<212> PRT  
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<400> 334

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met	Ala	Lys	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Gln	Asn	Arg	Ile
		20					25						30

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<400> 335

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met	Ala	Arg	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Gln	Asn	Arg	Ile
			20				25						30

<210> 336  
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<400> 336

His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

1 5 10 15

Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Gln Asn Arg Ile  
20 25 30

<210> 337  
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1 5 10 15

Met Ala Ala Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile  
20 25 30

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1 5 10 15

Met Ala Gly Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile  
20 25 30

<210> 339  
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His	Ser	Asp	Ala	Val	Phe	Thr	Asp	Asn	Tyr	Thr	Arg	Leu	Arg	Lys	Gln
1				5				10						15	

Met	Ala	Lys	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Arg	Asn	Arg	Ile
		20					25					30	

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1				5				10						15	

Met	Ala	Arg	Lys	Lys	Tyr	Leu	Asn	Ser	Ile	Arg	Asn	Arg	Ile
			20				25					30	

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<400> 341

His Ser Asp Ala Val Phe Thr Asp Asn Tyr Thr Arg Leu Arg Lys Gln  
1 5 10 15

Met Ala Ser Lys Lys Tyr Leu Asn Ser Ile Arg Asn Arg Ile  
20 25 30

